Chapter XII

ATTENTION AND INTEREST

THE mind is always attending to something. There is no such thing as inattention. When we call a pupil inattentive, we mean not only that he is *not* attending to the lesson but that he *is* attending to something else; that, from our point of view, he is attending to the wrong thing. The teacher's problem is how to capture that errant attention, and keep it directed upon the work that she has provided for it. The solution of the problem is quite simple in theory; exceedingly difficult in practice. The first step towards solving it is to inquire what attention is and under what conditions it most easily works.

412. What is Attention?

It is 'turning the mental eye in a particular direction, so as to see objects lying in that direction as distinctly as possible.'

It is 'the taking possession by the mind, in clear and vivid form, of one out of several simultaneously possible objects or trains of thought.'

It is 'singling out some part of the presented content for special treatment by the soul.' 'A concentration of consciousness upon any idea.'

It is choosing one object from the many around us, one idea from the many in consciousness, allowing it to rise to the centre of the field, the crest of the wave, the top of the dome, and holding it there for a longer or shorter time.

413. How does it begin and what determines it?

In Chapter IV we spoke of the chaos that must exist in the young child's mind in those days before it begins to 'take notice,' as we call it; when the sense-organs are all sending messages at once from the outer world into the soul, and the inner world must be 'one big, blooming, buzzing confusion.' But we said, too, that very soon from that crowd of sense-impressions the baby mind begins to *select* those that, from their greater intensity, have most attraction for it—a bright light, a loud voice, a moving object. To these it attends, momentarily, and the rest are ignored. Attention, we said, is *a process of selection* (100).

414. The things selected for attention are the things that cause some sort of feeling; a feeling of pleasure, or it may be of pain. A sun-ray or a pin-prick may attract the baby's attention equally, but the attendant feeling is different.

415. Feeling and attention, then, are closely connected, and because 'a *felt* thing is an *interesting* thing' we say that Interest and Attention are closely allied—so closely, indeed, that they are sometimes spoken of as parts of one state of consciousness: 'the back and front, obverse and reverse, of the same state.' Put thus strongly it sounds as if Interest and Attention were the same thing, but that is not what is meant; we have only to examine our own consciousness to know that it is not so. Though closely allied, they are quite distinguisl able.

416. The sense-organs of grown-up people are also constantly played upon by outside stimuli, the same process of selection is always going on,

and upon the same principle—namely, the things that interest us are the things that we attend to. Professor James comments on 'the extraordinary fact that, though we are besieged every moment by impressions from our whole sensory surface, we notice so small a part of them.' He suggests as a reason for it that in mature life our interests have settled down in a few permanent directions, and that we attend only to such sense-stimuli as remind us of those permanent interests; to the rest we are irresponsive. Evidently then, Interest determines Attention.

417. You will recognize this as a part of your own experience. In a walk down Regent Street, what kind of things do you oftenest look at? Can you pass a music shop? Do you not stop to read the concert announcements outside the Queen's Hall, and is not your attention attracted to the pianoforte, violin, or vocal recital according to what your own study is? Interest directs your attention; and your interests, though not limited to music, are mainly in that direction.

418. But take a child with you, and your walk will take twice as long. Things in the street as well as in the shops will call forth the constant 'What's that?' You will have to stop at every window that shows bright and pretty things. The gorgeous flowers, the still more attractive fruit; and the toys—oh, the toys at Hamley's! Children have few settled interests, and so their attention is attracted hither and thither with a butterfly inconstancy.

419. This restlessness of attention is very valu-

able to them. They are made that way, on purpose that they may develop in every direction. Every sense teaches them something, and they are saved from the lop-sidedness that would surely result if we could pin their attention down to the things we would like to present to them.

420. This kind of attention, given naturally to the things that attract us, is called Involuntary Attention. The term explains itself. It is the kind of attention we give because we cannot help it. It is sometimes called Spontaneous Attention, which is a better name.

421. But we often have to attend to things that have no attraction for us, subjects that we may even dislike, but which it is necessary for us to know, and to which, therefore, we must give attention. Then there is a struggle. When the subject is interesting in itself, Inclination and Will pull in the same direction; but where no interest exists, Will and Inclination pull different ways. The pupil may be quite *willing* to attend, and because this is so we call this kind of attention Voluntary; but with all the will in the world it is extremely difficult to resist the attraction of other ideas or of outside sensations when engaged in uncongenial work. You can prove this by personal experiment.

422. Take in hand a book on some subject in which you feel no interest, but which, for one reason or another, you are driven to study. Shut yourself up with it for an hour, with the purpose of mastering a portion of it. If the uninteresting subject is treated in an uninteresting manner, how

often will your mind wander to the veriest trivialities, and have to be called back by a distinct effort. How glad you are when the hour has passed, and *how little you seem to have learnt in the time.*

423. Voluntary attention is always attended by effort, and the effort is never made except under the influence of some external motive. In the case of the adult, the desire for self-improvement or advancement is a sufficient motive. In the case of a child it is the wish to please parent or teacher, the desire for prize or class-place, or the fear of evil consequences if the effort is not made.

424. But suppose that in that experiment of yours the book from which you expected so little turns out to be written in an attractive way, you can attend with much less effort, and probably you will find yourself after a while wanting to know more about the subject itself—which is the same as saying that it has begun to have an interest for you. As knowledge and interest grow, there will be less and less effort needed to pin your attention to the new study, and instead of having to drive yourself to your task you will find yourself attracted by it. The voluntary, needs-must, sort of attention with which you began has given place to natural, spontaneous attention.

425. To bring about this change of attitude must be the teacher's great aim; for though we cannot avoid setting tasks which require voluntary attention on the pupil's part, and though we feel that it is good for them to make the necessary effort, we know that that kind of attention, voluntary though it be, never accomplishes so much

as the attention that is spontaneous—attracted, interested by the subject itself.

426. Attention works, then, on this principle: the more interest the less effort; the less interest the more effort. And this gives us the key to the teacher's problem. If you want to keep your pupil's attention directed to the lesson in hand, you must be interesting.

427. By this I do not mean be amusing. Some people think that children need to be eternally amused, and try to be funny when teaching, but this is to under-rate the pupil's instinctive sense of the fitness of things. The child of average intelligence looks upon lessons as serious business, talks of them as his 'work,' does not pretend to like the work perhaps, but feels more grown-up and important for having to do it, and resents its being treated with undue levity. A joke is not barred—indeed, quickness in seeing the point of a joke is a good test of general intelligence—but the really interesting teacher is the teacher who can make the work itself interesting. To do that we must learn a few more facts about Interest and Attention.

428. *The mind cannot attend to one unchanging thing for any length of time.* The duration of active, voluntary attention is very short.

> The longest stretch of attention recorded is a stretch of twenty-four seconds, and the average length of attention is no more than five or six seconds.'—*Titchener.*

If this is so when we want to attend, the spurts are likely to be shorter when we do not particularly want to attend; and we must remember that the

things we wish our pupils to attend to are not always things that they are thirsting to know. When we realize how difficult attention would be to ourselves in such a case, we must also realize that it is a hard thing to expect from a little child, and we shall feel sympathy and encourage effort.

429. The teacher should remember, too (34), that in the act of attention there is an actual using up of brain tissue. With the effort of attention some cells in the cortex explode, and when a cell has exploded it must be recharged before it can act again. That is why we can only give voluntary attention for a few seconds at a time. The spurt of attention corresponds to the successive discharge of cortical cells.—(*Titchener.*) When a child is set to keyboard exercises at an age when the fine muscles of the fingers are not yet under control (83), it is not the little fingers we are tiring, but the little brain; because all new movements demand concentration of attention, and that means brain fatigue. If mothers realized this, they would not insist on their little five-year-olds being seated on a piano-stool, but would let them sing, and listen, for a couple of years longer.

430. It is advisable to prepare the pupil's mind for a new presentation by announcing it beforehand. For example, if we say, 'To-day we are going to learn a new pulse-group and a new time-name,' all that the pupil knows about these comes to meet the new knowledge (285).

431. Besides this general preparation we can adjust the attention in definite directions. For instance, we give two kinds of time ear-tests:

(*a*) Recognizing and describing the measure of tunes played, (*b*) Writing rhythmic phrases from dictation. Before giving a time-test, be sure that the pupil knows what he is to listen *for*. In the measure tests he listens for *the order of the accents*; in the rhythmic test he listens for *what the time-names say to him* ('Guide,' Preliminary Course, Third Lesson). The pre-adjustment of attention makes the pupil's mental process more definite.

432. In giving beginners ear-exercises on the scale-sounds we sometimes ask them to recognize a given sound in a group of three or more. We say, 'I am going to sing five sounds. One of them will be *soh*. Listen, and tell me which it is.' And we sing, perhaps, **d l s m d** to figures or to *lah*. The children who have a clear mental image of *soh* will instinctively keep their attention on the alert for that *one* sound, and all the others pass by unnoticed (162). These listen definitely; they pre-hear, and recognize. Others, who are hazy as to the sound of *soh*, will, as it were, try to examine all the sounds as they pass, in the hope of discovering *soh*. These listen vaguely. They have nothing definitely in their minds with which to compare what they hear. These are the children who need help; and we can give preliminary exercises to induce the habit of calling up the mental image of any particular sound. Give the key-chord. Say 'Think *soh*. Don't sing it; don't even hum it. Just think it. . . . Hands up, those who can hear it in their minds. . . . Now let those alone sing it.' Then give the group test to all, telling them to think *soh* as soon as you give the key-chord and

before you sing the group. The pre-perception of the sound will help its recognition.

433. In private teaching there is a greater strain on the pupil's attention than in class-work. The attention of the solitary pupil is always being called back to the point by the teacher. In class, voluntary attention to the illustration on the blackboard is relieved by involuntary attention to the fly on the window-pane. So, in the teaching of most subjects, the private lesson should be much shorter than the class lesson.

434. But music is so many-sided that by change of topic fatigue to any one set of nerve-centres can be avoided. We may divide a lesson to a child this way:

(*a*) Hand movements, at or away from the piano. Here the commotion is among the motor nerves.

(*b*) Locality; associating staff and keyboard. The visual centres at work mainly.

(*c*) An ear-exercise. Observation of pitch-relations. The aural centres involved.

(*d*) The reading of interval. Hand and eye again at work. And so on.

The pleasurable feeling of taking an intelligent share in duet-playing, or showing independent power in solos, arouses fresh interest and starts a fresh spurt of attention when we come to the recreative music. This, because the pleasantest part of a lesson, can come last, while any topic which is difficult for the individual pupil should be tackled first, when the mind is fresh.

435. The mistake teachers commonly make is

giving too much time to each topic. The more enthusiastic the teacher, the more likely she is to make that mistake. Absorbed in the interest of her work, she forgets that the pupil's attention is giving out. For the pupil, a short concentration of attention is best, and then a change of topic. The new topic awakens fresh interest.

436. One of the difficulties in all teaching is to handle one's topic in such a way that the pupil sees it from various points of view. Monotony in teaching is a crying sin, for it kills interest and puts the mind to sleep. Many a child's native love for music has been turned to dislike by the monotony of the practice.

437. Five-finger exercises, in the case of young children, we may dismiss as hopeless from the side of interest. Treating them rhythmically has been tried, but without much success.

438. Scales are a necessity; not merely for the sake of finger dexterity, but because they are, or ought to be, the pivot on which turns all the pupil's knowledge of key. To ill-taught children, scales are separate facts, sufficiently alike to be monotonous and sufficiently unlike to be a worry. Yet scale-teaching and scale-practice can be very varied and very interesting.

439. But—

(*a*) Do not teach scales from a book. When seen in print the long array is fearsome to a child; and when a pupil starts with a three-octave scale, and continues to play three-octave scales all through her school life, they are apt to pall.

(*b*) Do not speak of *scales* at all, but of *the* scale.

The interest is in finding out what happens when the same little up-and-down tune is played on different parts of the keyboard. The meaning of key-signatures is clear when the pupil builds his own scales in this way, and the gradual unfolding of knowledge keeps interest alive.

(*c*) Secure the understanding before you begin the playing. Progress will eventually be quicker, for understanding always helps skill.

(*d*) From the beginning associate chord knowledge with scale knowledge. The discovery that chords are selections from the scale-sounds, and that *the same things happen in every key*, is interesting in itself, and is the fundamental principle of harmony and transposition. The principle can be grasped through quite elementary work.

(*e*) Remember that it is not necessary that the pupil should know all that there is to know about scales and their relationships in his early lessons. Give a few ideas at first, right ideas that he will never have to unlearn, and add the rest by degrees as you go over the ground again. The child's initial needs are: (1) To know what a scale *is*. (2) To be able to play it in any key, i.e. to see how it works out on the keyboard at any pitch; for this, one octave, played with one finger, is sufficient. (3) To discover what happens when we begin a scale on the over-fifth (*soh*) of the last one, and then when we begin on the under-fifth (*fah*). (This is scale-*theory*, key-*knowledge*.) (4) To see the common sense of scale-fingering.

(*f*) The teacher must use her own judgment as to when to begin scale-*playing*. When it does

begin, the child who can build a scale on any key-note has the great advantage of not being obliged to begin with the scale of C, in which the fingering is liable to accidents; but can begin with B, in which only one fingering is possible, and the reason for the alternation of three-finger and four-finger groups is obvious. B♭ is a good scale to follow, beginning at the top with the right hand, at the bottom with the left. The next best are D with the right hand, D♭ with the left, beginning both from below. These are the safe scales, and give sufficient variety until the alternation of the finger-groups becomes a *habit*.

(*g*) As facility increases we can avoid monotony by grouping the scales according to their various relationships. In fact, the inventive teacher will always have some fresh device to prevent monotony in practice if she knows that when the hands are employed in vain repetition the mind takes a holiday. Practice without attention is of little use, and attention without interest is extremely difficult.

(*h*) Pieces naturally give more scope for variety of treatment, so that at each lesson we may bring out a fresh point of interest. If practice is mere repetition, a piece soon becomes stale. It is the unchanging thing that palls.

440. Interest has laws of its own, within which we must work.

The too familiar has no interest for us; it either bores us or we pass it by unnoticed.

But neither have we interest in the entirely unknown. It makes no appeal. There is nothing for it to appeal to.

The new thing in which we recognize some connection with a known thing, or some likeness to it, is the thing that interests. It arouses curiosity, the wish to know more, and that is the attitude we want in a pupil; for when we want to know more about a subject we attend to it spontaneously. 'The old in a new setting or the new in an old setting is the arrangement that secures interest.' The reader who remembers what we have said about apperception will see why this is so.

441. 'Very often the teacher must introduce ideas into the mind of the pupil, not so much for their immediate importance as for the use to be made of them at some future lesson.' This should interest us, because it is a thing the average teacher would hardly think of doing. Why should we do it? 'Because there is no greater charm for any one than to find that a certain fact known in one connection suddenly comes to be of use in an entirely new way.' We are warned, however, that though an idea may be introduced before it is actually required, 'it must never be brought in where it is felt to be out of place.' And the warning is needed; for sometimes young teachers, in their zeal to follow counsel, will endeavour to do so at all costs, and while observing one maxim may infringe another which is of more consequence. Specimen lessons afford many examples of this. We must not drag in an idea just for the purpose of using it by and by.

442. But it often happens that the fit and proper moment for introducing an idea is a considerable time before the pupil has any actual need for it.

An instance of this is the teaching of the meaning and use of the C clef. The right time for teaching this is when we are teaching the other clefs and breaking up the great staff into five-line staves. If it is not done then, we are asking for trouble later on. John Curwen said: 'An idea may be presented too soon or too late.' Too soon, i.e. before the pupil has the ideas necessary for its apperception. Too late, if misunderstandings have sprung up and wrong connections have been formed. True, the pianist, merely *as* pianist, may never need to use the C clef;* but we do sometimes take up other instruments for the sake of taking part in orchestral or chamber music, or for the pure delight of applying our knowledge to something fresh. If this should happen, and the student should see others puzzled by this very simple little C clef, he may think with gratitude of the teacher who made it all clear to him when a child, though now, for the first time, he has a use for it.

443. The same kind of apperceptive interest is aroused when a pupil who has only sung from the modulator and the Tonic Sol-fa notation begins to apply his knowledge of these to the Staff. And again when, apart from its old connection with singing, he finds in the modulator a help in scale-building on the keyboard, and in the Sol-fa notation the key to transposition.

444. When teaching the elements—through the keyboard—it is well to introduce what we may call the 'white' sharps and flats (B♯, E♯, C♭, F♭)

* It is sometimes used for transposition, but this is a rather mechanical, rather clumsy, and (I think) a very difficult process.

when treating of sharps and flats in general. It is the natural point at which to do it, and it prevents a misunderstanding common among children, namely, that the sharps and flats are 'the black things'; we must 'let the first impression be a correct one.' (*Maxim* 11.) Now, little pupils have no immediate use for this particular bit of knowledge. But later, when building up the scales, they find the *need* of the white sharp. They have to use it in key F♯, but they are not puzzled by it as they would be if it were not an old acquaintance. In key G♭ they find the need of the white flat in the same way, and take it as a matter of course. That bit of knowledge for which they had no immediate use is very important to them now.

445. But knowledge which does not come into immediate use must be kept alive; for if it remain too long in the lumber-room beneath the threshold it may become rusty and be difficult to find when wanted. It is possible to keep alive the understanding both of the C clef and of the white sharps and flats without encroaching on the time needed for the more immediately needed exercises. ('Guide,' Part III, Section II, and Appendix III.)

446. *Interest is kept alive by the gradual unfolding of knowledge.* When first teaching the ♯, ♭, and ♮, merely as indications of locality, we assign to each a certain function, *raising*, *lowering*, or *restoring* the pitch of a line or space. And that is sufficient unto the day. But later, when looking more closely at the subject of key, the pupil finds that these signs may to some extent exchange functions. The natural can sharpen or flatten, and

then its function of restoration is handed over to the sharp or flat as the case may be; what it sharpens is restored by a flat, and what it flattens is restored by a sharp.

447. We must not expect the young pupil to make such discoveries unaided, though some children may do so,* nor would I make it the subject of a theory lesson, because children would not understand it if it were all fired off at them at once. If presented gradually, as cases occur in their pieces, it all becomes simple enough, and gives a new interest to old facts. In the same gradual way pupils will learn to judge whether accidentals indicate change of key or are merely chromatic. Knowledge which grows thus naturally and gradually, one fact out of another, is interesting, and 'the more unconsciously interest is developed, the healthier the process.'

448. *The teacher must look at every problem from the pupil's point of view.* Now it has been said—and you may meet with the passage—that 'no adult can take a child's point of view,' because

* Here is an example. The child was about eleven, pupil at a London County Council school, where she sang from Tonic Sol-fa, and was learning the piano and applying her knowledge to the keyboard. After working out the scales in all keys and building up the key-signatures, she suddenly turned to her teacher and said, 'But there aren't *really* any sharps and flats in the scales.' The teacher, for the moment, was taken aback, but then saw the child's meaning. To her, with the modulator in her mind's eye, sharps and flats were *outside* the scale, living in the margin—chromatics, in fact—for use when needed; and while working out her scales she had realized that the sharps and flats of the signatures were only adjustments of the keyboard and that they represented the diatonic sounds—though she did not know that word—the sounds in the middle column. To her they were 'not really' sharps and flats. She was right, but the average child would not have seen the point—nor the average teacher.

'one can no more hark back to the mental than to the physical life of a child.'* There is, of course, a truth in this, but it would be equally true to say that when we argue with an adult it is impossible to see from his point of view, because we can no more use his mind than we can adopt his body. It is a pity to raise the question at all, because an unexpected and startling statement like that sticks in the mind, and a careless reader may not notice that the writer makes the matter quite clear, and in rather a striking way, later on.†

449. Everybody knows what is meant by the common phrase, 'Seeing a thing from another person's point of view,' and nobody takes it literally. In the case of the adult, we learn in the course of our argument something about his circumstances, his interests, perhaps even his upbringing; and then we imagine what our outlook would be had our experiences been identical. In the case of the child-pupil we think of our own childhood, we recall our experiences of other children, the recorded experiences of other observers, and what we know of mental development, and then, knowing the mental content of the particular pupil, we imagine what our outlook would be if we were seven, or ten, or fifteen years of age, and had just our pupil's stock of ideas. It is by *sympathetic imagination* that we get the child's point of view, and unless we do get it we can do nothing with him. 'All who would enter into the garden of a child's mind must, like "Alice in Wonderland," make themselves small enough to

* Welton's 'Psychology of Education,' p. 20. † *Ibid.* p. 27.

enter by the enchanted door. Like her, they must go back for the little key.' That is why people who are very highly gifted in music themselves are seldom the best teachers of children. They cannot make themselves small enough, and they never find the little key. With all the zeal in the world they remain outside the door.

450. *A teacher who is not herself full of lively interest in her work cannot hope to interest her pupils.* In one of Tobias Matthay's books he says that the pupil should feel that his progress is to his teacher 'a matter of life or death.' That is his forcible way of saying that perfunctory teaching never arouses a pupil's interest, never accomplishes much. And it is useless to pretend to an interest you do not feel, for children see through you in a wonderful way. Your interest in the work must be real. If it is real you cannot help showing it, and that gives your pupil an interest in *you*, which lays him open to the infection of your own interest.

451. *If we would keep pupils interested we must let them do their full share of the work.* The teacher with a quick brain sometimes finds it difficult to wait while the pupil, or the class, thinks out the next stage in a process. She will ask, 'What do we do next?' and then, with hardly a pause, will do it herself, saying, 'That's it, isn't it?' To the pupil who is thinking—who is, perhaps, on the point of answering—this is very irritating, for the 'let-*me*-do-it' feeling is strong in childhood, and if it is killed, interest dies with it. A little difficulty stimulates. If a teacher thoroughly knows

her class, she knows just how much difficulty they can tackle, and if the pupils have confidence in the teacher they will know that she does not put questions that are entirely beyond them. They will feel that though the problem may look difficult it is within their powers, and then the hunt for the answer becomes not only interesting but exciting. A little patience, a little guidance, a correction here, a suggestion there, and when the problem is worked out the class as a whole will feel that '*we* did it,' while each member whose answers have helped knows that she has done her bit.

452. In his valuable little Primer on Teaching, from which many of the above passages are quoted, Professor Adams raises the very interesting question: 'Should the interest-curve be high or low at the end of a lesson?' I cannot do better than answer in his own words:—'At first sight it would seem that the progress in a lesson should be marked by a gradual increase of interest, and that the end should be the highest point of interest. But it must be remembered that the lesson has to be considered from two points of view: (*a*)It is a unit so far complete in itself; (*b*) It is a unit in a more complex whole. It has therefore two functions to perform. As an independent unit it must satisfy the interest it has aroused; for this is only another way of saying that it must be complete in itself. As a part of a wider whole, as one in a series, it ought to finish with sufficient unexhausted interest to carry the pupil over to the next lesson.' Comparing a series of lessons to a

well-written story, he says: 'While the chapter-interest dies with each chapter, the story-interest goes on increasing from chapter to chapter. So in teaching: the lesson-interest should run down at the end of each lesson, but the interest of the course as a whole should rise from lesson to lesson.'